

**Notice of Allowability**

Application No.

10/804,193

Examiner

Mohammed Hasan

Applicant(s)

ARATA ET AL.

Art Unit

2873

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to \_\_\_\_.
2. ☒ The allowed claim(s) is/are 1 - 10.
3. ☐ The drawings filed on \_\_\_\_ are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some\* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_.

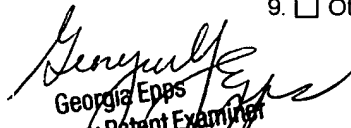
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☒ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_.
- (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 9/8/2004
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date 3/24/2005.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_.

  
Georgia Epps  
Supervisory Patent Examiner  
Technology Center 2800

## DETAILED ACTION

### EXAMINER'S AMENDMENT ✓

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with John G Smith on March 23, 2005.

Abstract amended as follows:

Using a solid immersion lens (SIL) 4 having a spherical lens surface 40 with a radius of curvature  $R_L$  from a material having a refractive index  $n_L$ , an image of a sample 2 is observed. ~~In this sample observation, a~~ A geometric aberration characteristic caused by the SIL 4 is evaluated by using a predetermined optical system. Using a coefficient  $k$  ( $0 < k < 1$ ) set so as to satisfy a condition where the average image surface becomes flat or a condition yielding a favorable chromatic aberration characteristic, the sample is observed with the solid immersion lens 4 while a surface, orthogonal to the optical axis  $Ax$ , including a point located downstream of the spherical center  $c$  of the lens surface 10 by  $(k \times (R_L / n_L))$  along the optical axis,  $Ax$  is employed as a sample observation surface 20. This realizes a sample observation

method ~~which makes it possible to~~ that can observe the image of the sample favorably with a solid immersion lens, and the solid immersion lens.

***Priority***

2. Receipt of acknowledged of papers submitted under 35 U.S.C. 119 (a) – (d), which papers have placed in the file.

***Oath/Declaration***

3. Oath and declaration filed on 7/29/2004 is accepted.

***Information Disclosure Statement***

4. The prior art documents submitted by applicant in the Information Disclosure Statement filed on 9/8/2004 have all been considered and made of record (note the attached copy of form PTO – 1449).

***Allowable Subject Matter***

5. Claims 1 – 10 are allowed.
6. The following is an examiner's statement of reasons for allowance: The prior art taken either singularly or in a combination fails to anticipate or fairly suggest the limitations of the independent claims, in such a manner that rejection under 35 U.S.C.

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102 or 103 would be proper. The prior art fails to teach a combination of all the claimed features as presented in independent claims 1 and 8, for example, which include a solid immersion lens having a spherical surface, a radius of curvature  $R_L$ , a refractive index  $n_L$  and the sample is observed with the solid immersion lens, sample surface orthogonal to an optical axis and a point located downstream of a spherical center of the optical surface by  $k \times (R_L / n_L)$  along the optical axis, where  $k$  ( $0 < k < 1$ ) is a coefficient set satisfy the solid immersion lens a geometric aberration characteristic (claim 1); and a sample refractive index equal to the refractive index  $n_L$  of the solid immersion lens is  $L = R_L + k \times (R_L / n_L)$ , where  $k$  ( $0 < k < 1$ ) is a coefficient set satisfy the solid immersion lens a geometric aberration characteristic (claim 8).

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The closest prior art

Pakdaman et al (6,594,086) discloses a bi-convex solid immersion.

Legrand et al (6,560,030 B2) discloses a solid immersion lens structure is a translucent pliant elastomer cast to a desired shape and smoothness.

Ishida (6,369,957 B1) discloses a solid immersion lens and production method.

Paton et al (6,831,782 B2) discloses a solid immersion lens and method of making.

### ***Drawings***

8. Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

9. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammed Hasan whose telephone number is (571) 272-2331. The examiner can normally be reached on M-TH, 7:00 AM to 5:30 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps can be reached on (571) 272- 2328. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MH  
March 24, 2005

  
Georgia Epps  
Supervisory Patent Examiner  
Technology Center 2800